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ARRANGEMENT IN A NETWORK SWITCH FOR PRIORITIZING DATA FRAMES BASED ON USER-DEFINED FRAME ATTRIBUTES

ABSTRACT OF THE DISCLOSURE

A network switch includes network switch ports, each including a port filter configured for detecting user-selected attributes from a received layer 2 frame. Each port filter, upon detecting a user-selected attribute in a received layer 2 frame, sends a signal to a switching module indicating the determined presence of the user-selected attribute, for example whether the data packet has a

5   prescribed priority value. The network switch includes a flow control module that determines which of the network switch ports should output a flow control frame based on the determined depletion of network switch resources and based on the corresponding priority value of the network traffic on each network switch port. Hence, any network switch port that receives high priority traffic does not output a flow control frame to the corresponding network station, enabling that network station to continue

10   transmission of the high priority traffic. In most cases, the congestion and depletion of network switch resources can be alleviated by sending flow control frames on only those network switch ports that receive lower priority traffic, enabling the network switch to reduce congestion without interfering with high priority traffic.